

# WHITE MOUNTAIN APACHE TRIBE BIOMASS POWER GENERATION FEASIBILITY ASSESSMENT

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Final Technical Report Summary - DOE  
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# Project Overview



Whiteriver , Arizona

White Mountain Apache Tribe

Biomass Power Generation Economics

Fort Apache Tribe Company (FATCO) Excess Biomass

Tribal Forestry Department Forest Management Practices

Canyon Day Wastewater Treatment Discharge Water

Enhanced Combined Operations

# Project Participants



White Mountain Apache Tribe

Fort Apache Tribe Company (FATCO)

Tribal Forestry Department

Canyon Day Wastewater Treatment Facility

Possible Third Party Equity Participants

Third Party Energy Purchasers

# Objectives



Assess Biomass Power Generation Economic Viability

Create Use for Excess Biomass From  
FATCO Logging

Tribal Forestry Department Forest Management  
Create Profitable Tribal Enterprise

Create Additional Permanent & Construction Jobs

Potentially Create Additional Market for Expanded  
Forest Management Activities

# Project Specifics



Utilize Existing Transmission & Distribution Lines  
Excess Fuel & Forest Management Generated Biomass  
Delivered Fuel Cost Approx. \$2/G Ton to \$28/G Ton  
20 MW to be sold, Third Parties  
Potential Green Tag Credits  
Collaboration with Canyon Day Wastewater Treatment  
Facility  
Prevention of Significant Deterioration Permit

# Tribal Benefits



Forestry Management

7,000 Acres Annual Goal

Rodeo-Chediski 2002 Fire

Market For Biomass

Labor Efficiencies

# Tribal Benefits (Cont.)

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## FATCO

- Staff Sharing

- Reduced FATCO Boiler Maintenance

- Enhanced Steam Reliability

- Market for Excess Biomass (Disposal Issue)

- Lower Regulatory Risk

# Tribal Benefits (Cont.)

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## Permanent Positions

Operation & Maintenance	17
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## Temporary Positions

Construction	18 months
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# Estimated Project Costs

	\$ Million
Engineering, Procure, Construct & Develop	43.7
Debt Service Reserve & Other Reserves	2.6
Financing Costs & Fees	0.9
Interest During Construction	0.2
Total	47.4
Operation & Maintenance (O&M) Costs	\$000/Yr
Wages, O&M, Administrative	1,771
Fuel	464
Total	2,235

# Recommendations



- Develop & Build 20 MW Biomass Facility
- Sell Steam to FATCO
- Utilize FATCO Fuel
- Sell Output to Third Party
- Seek Lowest Cost Financing
- Tribe Own 100% of Project or Seek Partner to  
Provide Necessary Equity

# Next Steps



Tribal Council Decision on Project

Fuel Cost

Equipment Procurement & Installation Cost

Financing Terms

Permitting Requirements

Desired Business Structure

Determine Equity Source

Power Sales Agreement